Medibot: A Novel of Health Assistant System

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Abstract— The specific topic is chosen by undergoing a thought process about the current situation of health and mental problems. We studied the major problems that are being faced by people. At a fast pace life people do not discuss their issue openly about their mental health, our assistant provides them a platform where they can express their problem. By seeing various problem, we come with solution where end user can check treatment for different diseases, plan their diet from the nutritional information available, connect with our Bot to help them overcome their mental illness. Not Only, we provide natural home remedies to cure various diseases, but also, we suggest, Natural Exercise and Meditation to help them control depression, anxiety and boost their self-esteem.

Keywords: VS code, mongo DB, Express note, note JS

I. INTRODUCTION

Today people are more likely to get addicted to internet, but they are not concern about their personal health. They avoid going to hospitals for small problems which may become a major health issue in future. Initializing question and answer forums is becoming a simple way to answer the queries rather than just browsing through the list of potentially relevant documents from the web. Many of the existing systems have some limitation such as there is no instant response given to the patients, they must wait for expert's acknowledgement for a long time. Some of the applications may charge money to perform live chat or telephony communication with doctors online. The aim of this research project was to create a one stop destination for end user to check upon treatment for different diseases, plan their diet from the nutritional information available, connect with our Bot to help them overcome their mental illness at free of cost.

II. EXISTING SYSTEM

These are the existing system for Mental Health, Nutrition and Diseases:

A. Systems for Mental Health:

Sr. No.	Existing	Benefits	Limitations
1	Woebot[1]	Woebot uses cognitive behavioral therapy (CBT) to help users get better by challenging and changing unhelpful cognitive distortions and behaviors.	Woebot is fixed bot and don't use AI for identifying intent of the user. Users Can't share their thought by chatting with it.
2	Joyable[2]	The bot helps users individuate a specific event triggering the negative feelings and then helps them to remove negative associations from it.	Joyable does not offer a free option but only a seven-day trial, after which it costs $99 a month.

B. Systems for Disease:

Sr. No.	Existing	Benefits	Limitations
1	medicinenet.com[3]	User can find relevant and reliable medical information on diseases and conditions also they provide plan for weight management.	It does not provide any diet guide for a particular disease and also misses out on providing different physical exercises to cure disease.

C. Systems for Nutrition:

Sr. No.	Existing	Benefits	Limitations
1	LysaChatbot[4]	Lysa is an AI-powered bot that uses natural language, GIFs and emojis to keep people engaged when giving them tailored nutritional advice.	Lysa chatbot is not capable of planning the diet chat according to user requirement.
2.	Joyable[2]	The bot helps users individuate a specific event triggering the negative feelings and then helps them to remove negative associations from it.	It doesn't provide any diet guide for a particular disease and also misses out on providing different physical exercises to cure disease.

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III. PROPOSED SYSTEM

We bring all three platforms i.e., Nutrition, Mental Health and Disease at one place. Our chat bot will play a key role in helping people who don't have much time to visit a doctor. Today at this internet era people spend most of the time surfing on the internet, and on our platform, they can easily visit us to find solution to their problem using internet. We find this useful for the people who are not expressive about their problem because of lack of education about Mental Health in society, so our chatbot will help those who are suffering from mental health issue.

The Proposed system "Medibot: The Health Assistant "is divided into two major modules:

- User Module
- Admin Module

A. *User Module:*

- Registration: user need to register to get credentials.
- Login: user can login using credentials
- Homepage: user can view the webpage where they get access to visit our Nutrition, Mental Health and Diseases section.
- Details: End user can check treatment for different diseases, plan their diet from the nutritional information available, and connect with our Bot to help them overcome their mental illness. Not Only, we provide natural homeremediesto cure various diseases, but also, we suggest, Natural Exercise and Meditation to help them control depression, anxiety and boost their self-esteem.
- Chat with Bot: user can chat with the bot regarding the query

B. *Admin Module:*

- Login: Admin can login by using credentials.
- Manage Details: Admin can update details related to Nutrition, Mental Health, and Diseases.
- Update User Profile: Admin can assign admin role to any user and can delete and update their profile.

C. *Solution Proposed:*

- We bring all three platform i.e., Nutrition, Mental Health and Disease at one place.
- Our chat bot will play a key role in helping people who do not have much time to visit a doctor.
- Today at this internet era people spend most of the time surfing on the internet, and on our platform,they can easily visit usto find solution totheir problem using internet.
- We find this useful for the people who are not expressive about their problem because of lack of education about Mental Health in society, so our chatbot will help those who are suffering from mental health issue.

D. *Benefit of Proposed System:*

- One stop destination-: Users can check treatment for different diseases, plan their diet from the nutritional information available, connect with our Bot to help them overcome their mental illness.
- Connect easily-: User can easily connect with our Medibot, so that they can find suggestion for their problem.
- Cost free-: Whatever guidance and suggestions people get from Medibot and our website is free of cost.
- Save time-: It saves the time of users, as they can easily surf on the Internet from their convenient location to know about different Diseases, Mental Health, and Nutrition at one place.

IV. TOOLS AND TECHNIQUES

A. *Tools used: -*

1) *VS code*

Visual Studio Code is a coding editor that helps you code in a suitable environment. It can be used for several programming languages, without switching editors. Visual Studio Code supports0 many languages, including Python, Java, C++, JavaScript, and more.

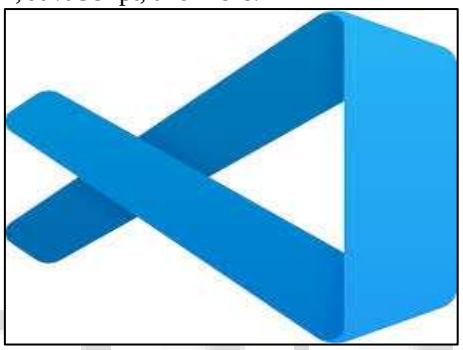

Fig. 1: Visual Studio Code

2) *Mongo DB Compass*

MongoDB Compass is GUI for the MongoDB. It allows you to analyze and recognize the contents of user's data without formal knowledge of MongoDB query syntax. In addition of exploringuser's data in a visual environment, you can also use it to optimize the query performance, control indexes, and implementing document validations. To use Compass, it is must to connect to an existing MongoDB database.

Fig. 2: MongoDB Compass

B. *Technique used: -*

1) *Mongo DB*

MongoDB is a cross platform as well as document-oriented database program. It is classified as a NoSQL database, it uses JSON-like documents with optional schemas. It is developed by MongoDB Inc. and licensed under the Server-Side Public License. Feature that are supported by MongoDB such as Indexing, Replication, Load balancing, File storage, Aggregation, Server-side JavaScript execution.

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Fig. 3: MongoDB

2) Express Framework

Express is the Node based web framework and it is the underlying library for the several other popular Node web frameworks.

Fig. 4: Express Framework

3) Node Js

Node.js is an open source, cross-platform runtime environment that allows developers to develop all kinds of server-side tools and applications in JavaScript. The runtime is planned for use outside of a browser context. As such, the environment excludes browser-specific JavaScript APIs and adds assistance for more traditional OS APIs including HTTP and also file system libraries.

Fig. 5: Node Js

V. RESULT AND IMPLEMENTATION

Whenever a user visits our website firstly, they must register to our website or login if they are already registered. After user is successfully logged in, they have access to all the services of our website, they can visit our Disease, Nutrition, Mental Health panel and use the chatbot to resolve their query. Medibot is an AI based chatbot that helps the users to interact with the bot to resolve their problems by asking question about different type of diseases, our bot also help the users by providing the nutritional information of different food products. Medibot is mainly designed for the people who are introvert and do not like to discuss their issue with other, using our chatbot these people can express their problem and our bot will try to resolve their problems and give them different type of suggestion like Meditation, Diet, Yoga asanas and help them avoid the food which may increase their problem.

Admin has the access to add new disease, Nutritional food Information, more information about different mental health issue and train the chatbot further to be more accurate and precise about user's queries.

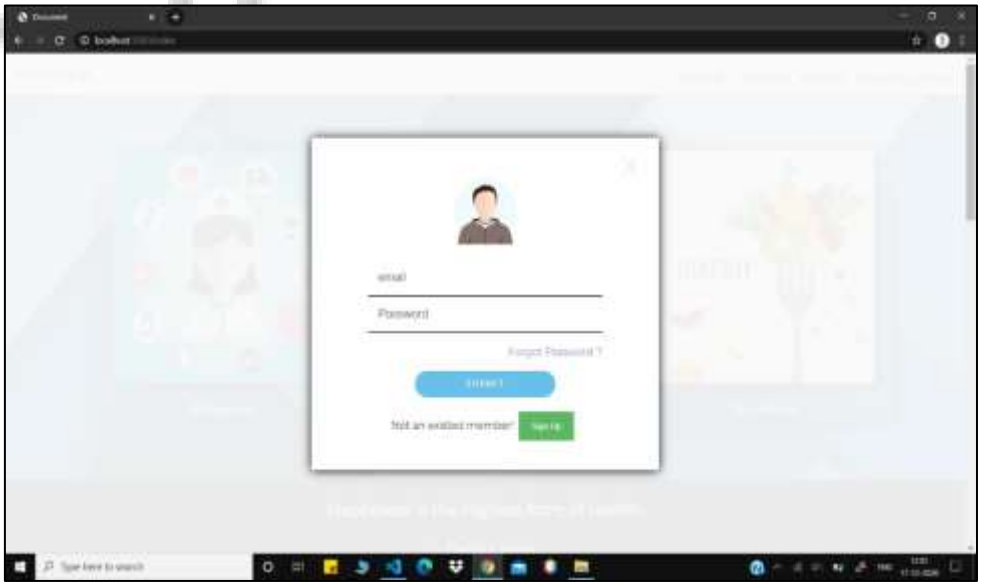

Fig. 6: Login Page

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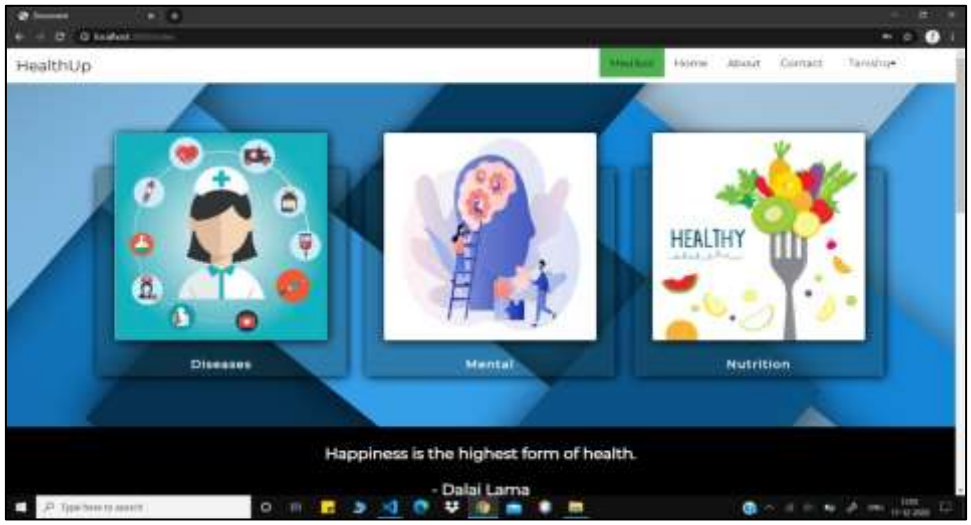

Fig. 7: Home Page

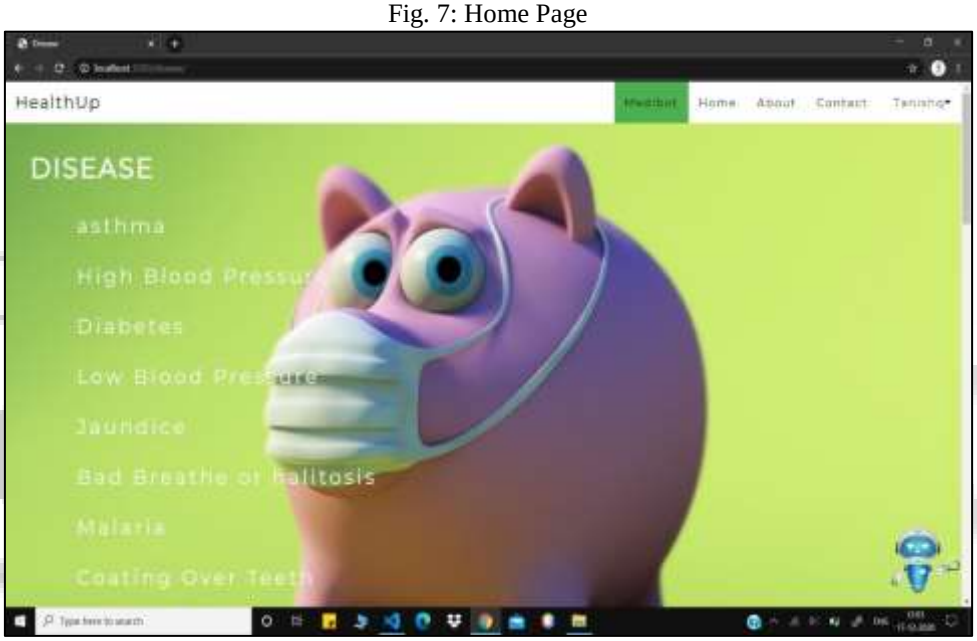

Fig. 8: Disease Page

Fig. 9: Mental Health Page

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Fig. 10: Nutrition Page

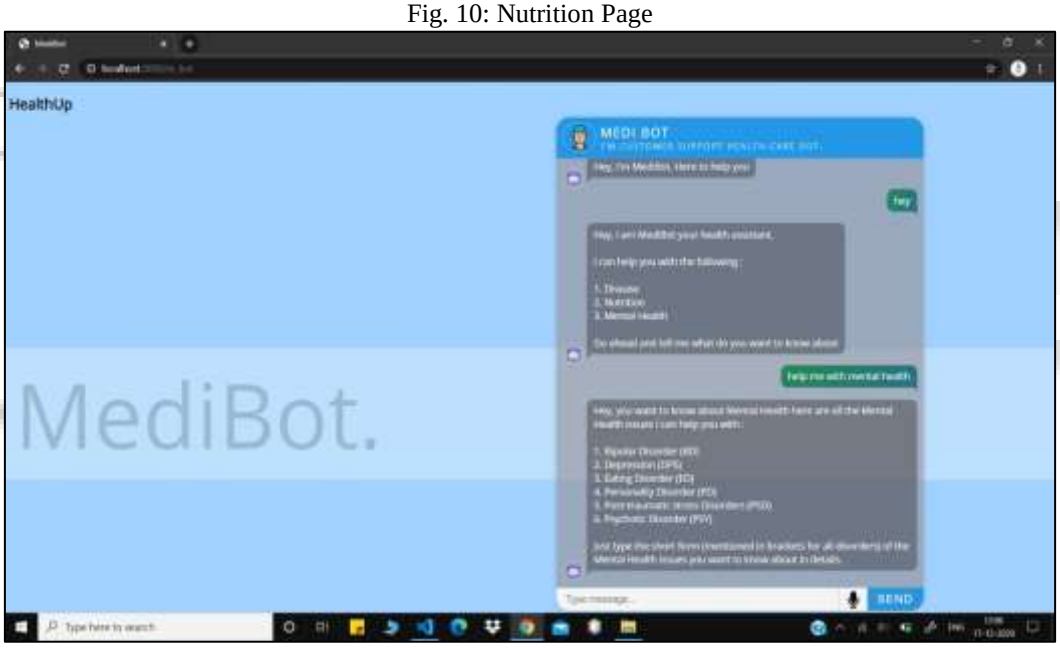

Fig. 11: Medibot Page

VI. Conclusion and Limitation

A. Conclusion

The proposed project is a step towards the optimum utilization of technological advancements to reduce and resolve the problems associated with the current problem of unavailability of reliable online medical support which help users to get information about Diseases, Mental Health and Nutrition at one stop.

Specifically, the system will eradicate the problems such as:

- Wastage of Time by visiting to doctor for normal diseases such as cough and cold.
- Wastage of Moneyon apps and website just to know the basic nutritional information about different food products.
- People do not share their problem with each other so the Medibot will helpthem in overcoming their problems.

Our aim for this project was to create a one stop destination for end user to check upon treatment for different diseases, plan their diet from the nutritional information available, connect with our Bot to help them overcome their mental illness.

VII. Limitations of the Work

- As there are lot of diseases and they keep on increasing in very high pace it is not possible to cover every disease on the website.
- The nutritional information of different product may vary due to difference in climatic condition, types of species of animals, quality of soil so it is not possible to give accurate nutritional information of food product.

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- Many mental health issues have similar symptoms, so it is hard to accurately identify the mental illness of a person.
- Users may have different opinion about the solution provided by the bot, depending upon the queries asked by users and the language and the grammar used to interact with the bot.

VIII. SUGGESTION AND RECOMMENDATIONS FOR FUTURE WORK

- Bot training for the future project would be given more priority so user may interact with the bot to get accurate result for their queries.
- To provide the information of Doctors in a city where users can get to them easily.
- Users will get a reset password link on their mail if they forget.

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